

ON THE
REMAINS OF LATER PRE-HISTORIC MAN

OBTAINED FROM

CAVES IN THE CATHERINA ARCHIPELAGO, ALASKA TERRITORY,

AND ESPECIALLY FROM THE

CAVES OF THE ALEUTIAN ISLANDS.

BY

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ADVERTISEMENT.

THE following description of the contents of a burial cave, discovered in the Aleutian Islands, and generously presented to the National Museum by the Alaska Commercial Company of California, has been prepared by the author at the request of the Smithsonian Institution. It is believed that the record of all the facts in regard to this collection will have an especial value, from the probability that these remains are not likely to be duplicated, and, even in the region from which they come, were, at the time of their collection, unique in the excellent state of their preservation. With this account of them the author has incorporated such notes, derived from his observation and experience among the Aleiits and other people of kindred stock, as might serve to explain doubtful questions in regard to the objects collected, or their uses or modes of manufacture; much of which he believes to be now recorded for the first time, and which may prove of value to ethnological science.

JOSEPH HENRY,

Secretary S. I.

SMITHSONIAN INSTITUTION,

Washington, D. C., January, 1876.

CAVE RELICS OF THE ALEUTIAN ISLANDS.

THAT great series of islands extending from the mouth of Cook's Inlet to the end of the Aleutian chain, and perhaps properly including the Commander's Islands, was named by Forster, in 1786, the Catherina Archipelago, in honor of Catherine the Great, Empress of all the Russias, to whose enlightenment and liberality the explorations in that quarter were largely due.

The chain between Lon. 163° and 188° W. of Greenwich bears the general name of the Aleutian Islands, from the term Aleüts, applied by the Russians to their original inhabitants.

East of Lon. 163° the various groups have local names, of which the more important are the Shumagin Islands, the Semidi Islands, the Kadiak group, and the Barren Islands.

The entire Archipelago is, or has been, inhabited by tribes of the Eskimo stock. These are naturally divided into two groups: I, the Kaniag'mûts, or typical Eskimo tribes, and, II, the Aleüts, or Aleutian Islanders.

The Kaniag'mûts, in language and physique, in implements and weapons, and in manners, are hardly distinguishable from those of the Western Eskimo, who inhabit the coast lands of the continent, from the Kusilvak mouth of the Yukon River to Cook's Inlet. The differences now existing are due to original local peculiarities,—common to each individual assemblage of settlements of any aboriginal stock;—and to the greater pressure of civilization which circumstances have brought to bear on them during the last three quarters of a century.

They are described by the earliest voyagers as independent in character, long resisting the efforts of traders to subdue them and of missionaries to christianize them; as sharing with the other Eskimo of that region, uncleanly habits, sensual practices, a belief in Shamanism, extreme facility in the use of the skin canoe or kayak, and great powers of endurance. To these they united certain peculiar superstitions, which indicate a passage from typical Eskimo animism toward the more differentiated and still more peculiar notions entertained by the Aleutians. The intercourse of the Kaniag'mûts with the latter people was greatly interfered with by the hostilities usual to adjacent and dissimilar aborigines in all parts of the world, and especially by the differences in their dialects. There is reason to

believe, however, that a certain amount of inter-tribal commerce always existed between them. After the advent of the Russians, hostilities were put a stop to; the extensive transportation of both Aleüts and Kaniag'müts from place to place within the territory previously divided between them, and the effects of civilization on both, have done much to efface early differences, except those of language.

We are obliged to follow general usage in applying the name Aleüt* (pronounced Aly-oot') to the tribes inhabiting the region west of the Kaniag'müts; although it is a word foreign to their language, and of uncertain origin. It was applied to them by the early Russian explorers, and is perhaps an opprobrious epithet from some one of the Eastern Siberian dialects. Their own name for themselves appears to be Unñngün, but they often follow the Russians in styling themselves Aleüts, while asserting that it is not their original name. While the comparison of even a limited number of *elementary* words from their vocabulary shows unmistakable evidences of their Eskimo derivation, yet, in construction, prefixes and suffixes, and in the majority of ordinary words in their language, they differ in a very marked manner from their neighbors and nearest relations, the Kaniag'müts. The Aleutian language is much richer, and they count from one to one hundred thousand by the decimal system, while the Kaniag'müts reach their limit of numbers at one or two hundred, using five as a basis.

The evidences of the shell heaps are conclusive as to the identity with the continental Eskimo of the early inhabitants of the islands, as far as implements and weapons go; but their insular habitat, and the changed fauna and climatic conditions under which they existed, gradually modified their habits, and their manufactures, of every kind. With these changes, it is probable, the language changed.

Their physiognomy differs somewhat from that of the typical Eskimo, though individuals are often seen who could not be distinguished from ordinary Innuits, in a crowd of the latter. It is probable that the climate, and almost uninterrupted canoe-life, may have much to do with this, and there is no impossibility in the hypothesis that occasional shipwrecked Japanese may have contributed to modify the Aleutian physique; though leaving no traces of their language or

* In a volume entitled *Memoires et Obs. Geographiques, etc.*, by Samuel Engel, (Lausanne, 1765, 4to,) and containing little else of value, I find some notes, which may perhaps afford a clue to the derivation of this much disputed word "Aleüt." He gives an extract of a letter from St. Petersburg, which appeared in the *Gazette de Leyden*, February 26, 1765, in which it is stated that the Russian fur traders, east of Asia, had discovered inhabited islands in 64° N. Lat. which they called *Aleyut*. He calls attention to the statement of Muller, to the effect that the people of the Diomedes Islands were called by the Chukchi "Achjuch-Aliat," and the adjacent coast of America "Kitchin-Aeliat," and suggests that Aliat, or Aeliat, and Aleyut are identical terms. The Chukchi word for island is known to be i'ñ-ā or cō-lñ-ā; "kit-chin" meaning great or extensive; hence it would seem as if the Russians, after forcing their way into Kamchatka, subsequently to their hostilities with the Chukchi, brought with them as a proper name the general Chukchi term for island, and subsequently applied it to the Aleutian Chain and its inhabitants when they were discovered. Much the same has happened to the Aleüt word for continent, now corrupted into Alaska.

handicraft among the Islanders. The common notion of the derivation of these people from the Japanese by emigration, owes its popularity chiefly to its superficiality, and cannot for a moment be maintained by any one conversant with the characteristics of both races. I assign very slight value to traditions, but such as they have, imply an Eastern and continental origin.

In character and mental attributes the Aleüt differs from the Kaniag'müt, even more than in physique and language.

Uniting a greater intellectual capacity, with equal (if not superior) facility in canoe-navigation and the chase; the Aleüt in personal independence of character is far inferior to his neighbors. How much this has been due to the comparative security of their island homes, and how far to the merciless persecution and numberless outrages to which they were subjected by the early Russian traders, cannot now be determined. It is very evident however that the Russians found a great difference at the outset between the Aleüts and Kaniag'müts, in this respect.

A perusal of the chronicles of the early trading voyages sufficiently attests this.

There were numerous petty conflicts between the different groups of Aleutian Islanders, chiefly arising from disputes in regard to the limits of their hunting grounds, and traces of this feeling exist even to the present day, though it is many years since any troubles have occurred. But the vindictive and energetic conflicts which characterize the disputes between continental Eskimo tribes and the Indians, do not appear to have ever been paralleled among the people under consideration.

A discussion of all the characteristics of the two peoples is not within the scope of this paper, but some reference to such differences is necessary to a complete comprehension of what follows.

The Aleüts possessed great endurance, especially in regard to cold; hospitality was one of their prominent traits, as were love of children and deference to the aged. They were not uncleanly compared with other wild tribes, and the activity of their lives doubtless had something to do with their being less sensual than most of the Eskimo. Their form of Shamanism was in many respects peculiar, and their rites more complicated and mysterious, than those practiced by any other tribes of the same stock as far as we know. It is a matter of constant regret that in their earnest propagandism, the early missionaries took every means, secular as well as spiritual, of destroying all vestiges of the native beliefs and the rites which were practiced in connection with them. No record of them is any where preserved with the exception of a few casual allusions scattered through various works, relating to the exploration of that region. The little that we do know is so interesting that it renders our ignorance of the rest the more provoking. During the last eighty years so thoroughly have the natives

been drilled into the idea that the ancient rites were wholly infamous and damnable, that it is at present impossible to obtain any information; even from those whose age renders it almost certain that they must know a good deal respecting the ancient customs. They have even come to regard their ancestors as Pagans, and to attach no reprobation to the ethnologist who may rifle their burial places. It is probable that after the Russian rule became tolerably well established, some of the more independent spirits among them left the settlements and took to the mountains, or the less frequented portions of the shores of the larger islands, and for a time secured a precarious existence. At least I refer to some such origin as this, a singular superstition, still current, and firmly believed, even by the best educated and most intelligent among them. This is to the effect that there are still living among the mountains or on the less frequented coasts, bands of unchristianized people whom they denominate Vay'geli. These are supposed to be capable of any crime, and to nourish great hostility to the Christian natives.

Very intelligent natives firmly assert that they have seen them. In hard seasons they are asserted to visit villages in the night and steal food. If a raven carries off an Aleüt's fish, hung up to dry, it is referred at once to the Vay'geli; and if a native disappears—perhaps lost in his kyak in crossing a tide-rip in one of the straits—he is often supposed to have joined one of the bands of spectral outlaws.

It is almost needless to say that there is no reasonable ground for any such belief at present.

Like most of the Innuít tribes they were fond of dances and festivals, which, like those of Norton Sound, were chiefly celebrated in December. Food was then plenty, and the other hunting season did not commence till a little later. Whole villages entertained other villages, receiving the guests with songs and tambourines. Successive dances of children, naked men beating their rude drums, and women curiously attired, were followed by incantations from the Shamans. If a whale was cast ashore, the natives assembled with joyous and remarkable ceremonies. They advanced and beat drums of different sizes. The carcass was then cut up and a feast held on the spot. The dances had a mystic significance. Some of the men were dressed in their most showy attire and others danced naked in large wooden masks which came down to their shoulders and represented various sea animals.

They had religious dances and festivals in December. During these, temporary images, made of wood or stuffed skins, were carried from island to island and strange ceremonies, of which we have only dim traditions, were performed in the night. Hundreds of women, wearing masks, were said to have danced naked in the moonlight; men being rigidly excluded, and punished even with death on intrusion. The men had similar dances. An idea prevailed, that while

these mystic rites were going on a spirit or power descended into the idol. To see it, when thus occupied, entailed death or misfortune, hence they wore large masks carved from drift-wood, supported by a band behind the head and a cross bar held in the teeth. These had holes so cut, generally in the nostrils of the mask, that they could not see anything before or above them, but only the ground about their feet. After the dances were over, images and masks alike were destroyed. In further illustration of the same idea, the dead, supposed to have gone to meet the spirits in another sphere, had one of these placed over the face for requisite protection beyond the grave.

The methods of burial among the Aleüts, at the advent of the Russians, were as follows :

Poor persons were wrapped in their clothes, or in mats, and laid under some over-hanging rock, with a mask over their faces. A little drift-wood was sometimes placed under the body, but very rarely any weapons or implements. Often, to enclose the bodies, a sort of artificial cave was made by building up a wall of rough stones outside the bodies, until the face of the over-hanging rock was reached ; when the wall was closed over with earth and turf.

This sort of burial was noticed by me in several localities. On the island of Amaknak, close to Iliuliuk Harbor, Unalashka, a number of places were discovered where such burials had been made. No implements were found in them, except one bone arrow with its shaft and some fragments of masks. There was usually some coarse matting, or sea-lion skin, about the bones, the remains of the original wrapper. The bodies appeared to have lain at full length on their backs. The bones were usually much injured by falling fragments of stone from above, and the percolation of moisture through the crevices of the rocks. They had also been gnawed in many cases by the lemmings indigenous to the islands.

The same method was also noticed in the islands to the westward, especially at the island of Atka, where, on one of the small islets in Nazan Bay, under an over-hanging rock, fourteen or fifteen crania were obtained in good condition. The other bones were much decayed, and appeared to have been disturbed. A pair of ribs were found coössified from the capitulum to the distal extremity, but without any sign of disease by which this peculiarity might have been induced. The only implement found was a celt, or stone axe of a chisel shape, of a greenish slaty stone ; which is remarkable as the only celt found in all the Aleutian Islands during four years exploration ; during which time other implements were collected by hundreds.

The crania in this locality were huddled together on the surface and were visible from a little distance. The natives of the adjacent village believed that these skeletons held feasts and festivals, and that on returning to their original shelter they did not always take up the position that they had previously occupied.

The remains of those whom the early inhabitants held in honor, especially

wealthy persons having large families, or distinguished by their ability and success in the chase, were differently disposed of.

They were said to eviscerate the bodies through the pelvis; and then, to remove fatty matters, they were placed for some time in running water, and afterward taken out and lashed into as compact a form as possible. The knees were drawn up to the chin, and the bones were sometimes fractured to facilitate the consolidation of the remains, which then were carefully dried. They were placed in a sort of wooden frame, with their best clothing and most valuable furs, and secured with seal skin or other material so that the package should be as nearly water-proof as possible. This frame or coffin was then slung to a horizontal bar supported by two or more uprights, and left hanging in the open air or in some rock-shelter. Much grief and continued lamentations occurred after a death. These were often evinced by songs composed for the occasion, and the natives usually attended the body to its final resting place, in an irregular procession, beating drums or tambourines, and uttering loud cries. It is related that the mothers sometimes placed the body of a deceased infant in a carefully carved wooden box. This was often kept for a long time near them in the yourt, where the mother would watch it with the greatest tenderness, wiping away the mould and adorning it with such ornaments as she could procure. Implements or weapons were rarely or never placed in the case with the body, though occasionally a wooden dish or kantag' containing food, was inserted. But about the bodies, or their envelopes, utensils, and carvings were often deposited in large numbers. The cases containing the remains of infants were suspended from wooden arches, of which the ends were inserted in the ground, and these were usually placed under some rock-shelter.

It will be observed that in this paper I refer only to the methods in use among these people about the time of their discovery, a century and a quarter ago, and not to the more ancient usages which preceded them, of which we obtained many evidences which may properly find a place with the records of our observations on the shell heaps, in another paper. These included other forms of burial beside those now mentioned, though the caves were frequently used for the purpose. It is proper to remark also that the civilized form of burial, in the earth, has obtained among them since their conversion to Christianity, a period of some eighty years.

Still another method of disposing of the dead is noticed by the early voyagers.

The natives, especially in their winter villages, were used to construct large, half under-ground habitations, often of extraordinary size. These were so arranged by internal partitions as to afford shelter to as even as many as one hundred families. No fires were built in the central undivided portion, which was entered through a hole in the roof, provided with a notched log by way of ladder. In the small compartments each family had its own oil lamp, which,

with the closely-fitting door of skins, and the heat of numerous bodies in a very small space, sufficed to keep them warm. We learn that the bodies, while being prepared for encasement, as above described, were sometimes kept in the compartment which they had occupied during life until ready for deposition elsewhere. We also know from early accounts, proved true by our own excavations, that the bodies of the dead, in the compressed position before mentioned, were sometimes placed in the compartment, laid on their sides, and covered with earth with which the whole compartment was filled and then walled up. It is stated that others in the same yourt continued to occupy their several compartments after this, as usual, a proceeding very different from that of the majority of the Innuits, who usually abandon at once a house in which a death has occurred.

This is only one of several facts which show that the Aleüts did not feel that repugnance to, or fear of, the dead which is generally characteristic of tribes of that stock. In our excavations at the head of Uhlakhita Spit, Amaknak Id, Unalashka, we found in the remains of an old yourt several skeletons so interred.

It is an interesting and pregnant fact that, as we examine the prehistoric deposits in the order of their age, among the Aleutian Islands we invariably find that the older they are, the more the relics and evidences of customs approximate to the typical continental Eskimo type; and also that in the earliest historic times, customs were still in vogue among the Kaniag'müts that had already passed away among the Aleüts, (though formerly practiced, as evinced by the remains in early deposits in caves and shell heaps,) and that those customs, or some of them, still obtain among the northern and western Innuits, though now extinct among the Kaniag'müts. The gradual differentiation, from the typical Eskimo to the Aleutian type, is thus clearly set forth in an unmistakable manner.

Another modification of the cave burial, appertaining more particularly to the Kaniag'müts, but also practiced by the Eastern Aleüts adjacent to the Kaniag'müt tribes, will be more properly considered with the usages of the latter people further on.

From the present priest of Unalashka, a tolerably well educated and very intelligent man, himself a native Aleüt, many details in regard to localities and customs were obtained in 1871.

He informed us that in the Island of Adakh, caves and rock-shelters were in use by the early natives for burial purposes, and that the reports of hunters confirmed the existence at the present day of some of these remains, with masks and other articles in their proximity.

During my visit to Adakh in 1873, I was unable, for want of a guide, to confirm this; though I have no doubt of its truth. We found evidences, however, of an earlier and different form of burial.

We discovered in that year at Constantine Harbor, Amchitka Island, a skeleton interred in the earth, together with the remains of a small iron celt and some old fashioned beads, showing that this interment was subsequent to the Russian advent; though at the time of our visit the island had been uninhabited for nearly forty years.

On the island of Unalashka, at Chernoffsky Harbor, some years ago there still existed remains accompanied by masks and carvings in rock-shelters near the village. There was also a unique wooden tomb, constructed and carved with the ancient stone implements, in a very careful and elaborate manner, with the door so hung on wooden pins that it might be raised and the contents viewed, and by its own gravity would close itself on being released. In this tomb were the remains of a noted hunter, a toyon of eminence among the natives, surrounded by an enormous store of sea otter skins, garments, &c., all then in good preservation.

Since that time this tomb is said to have been rifled by an agent of one of the trading companies, and to have fallen into complete decay.

The most celebrated of these burial caves was situated on the island of Kaga'mil, one of the group known as the Islands of the Four Mountains, or Four Craters. This group is not at present inhabited, except for a short period during the hunting season of each year.

I visited these islands in 1873, but as the shores are precipitous, and there are no harbors, the weather was too boisterous to permit us to remain in the vicinity. Even if we had landed, it is probable that we could have done little without a guide.

The traders in the islands were aware of the existence of this cave and its contents, and one of them, Capt. E. Hennig, of the Alaska Commercial Company's service, had several times attempted to reach it unsuccessfully.

In 1874, however, the weather being quite calm, and the presence of a hunting party, which he was taking away from the island, enabling him to find the cave without delay, he visited it and removed all the contents, so far as is known. On their arrival at San Francisco, the company, (who had instructed their agents to procure such material for scientific purposes when compatible with the execution of their regular employment,) with commendable liberality, forwarded them to the National Museum at Washington. Two of the mummies were given to the California Academy of Sciences, but all the rest were received by the Smithsonian Institution. It is unfortunate that but few details were obtained as to the exact disposition of the bodies, or mummies, in the cave; the situation and form of the latter, and other particulars which would have had great interest. From accounts received from Father Innokenti Shayesnikoff, previously, I am led to infer that the cave is situated near the shore at a point where the coast is precipitous and without a beach, the landing being on large, irregularly broken fragments of rock, the talus from the cliffs above.

The island contains active volcanoes, as I am informed, and in the immediate vicinity of the cave are solfataras, from which steam constantly arises, and the soil is said to be warm to the touch. The rock is of a whitish and ferruginous color and sharp grain. Specimens examined by Dr. Endlich, of the Smithsonian Institution, prove to be a siliceous sinter, containing a little alumina and soda, and some hydrous sesquioxide of iron. In the spectroscope traces of lithium and potassium and, possibly, a trace of lime were seen.

From this, and from the fact that the atmosphere of the cave is said to have been quite hot, rendering it uncomfortable to remain in, it is possible that the cave itself may be the crater of a small extinct solfatara.

With regard to the age of these mummies, as they may be styled, I was informed, in 1871, by several of the more intelligent natives, that they fixed the date of the earliest interment in the following manner: It occurred in the autumn or winter. During the following spring the first Russians ever seen by the natives of the Four Craters, arrived in the vicinity. These may have been Trapesnikoff's party, which left Kamchatka in 1758, but did not reach Umnak until 1760; or they may have been that of the infamous Pushkareff; or possibly of Maxim Lazeroff; but, in any case, they can hardly have been the expedition of Bering. In 1757 Ivan Nikiferoff sailed as far east as Umnak, being the first Russian to do so; except those of Bering's Expedition, who did not land on any of the Andreanoff group; though in 1741 they saw the shores of numerous indeterminate islands from a distance. The earliest date therefore which we can assign to these remains would be 1756, making the oldest of them about one hundred and twenty years old.

At all events they possess great interest as the best preserved relics of the state of things as they existed immediately prior to the Russian occupation, and when their pursuits and handiwork had not been modified by the introduction of any of the adjuncts of civilization.

The tradition regarding these particular remains was noted by me from the account of the Rev. Father Innokenti, and the same account was reduced to writing by him, and forwarded with the mummies to the Smithsonian Institution.

A translation of it is herewith given:

"On the island of Kagámil lived a distinguished toyon, a rich man, by name Kat-háya-Koocháak. He was a very small man, but very active and enterprising, and hence much respected, and even feared by the natives of the adjacent region. He had a son 13 or 14 years old, whom he fondly loved. He built him a little bidarka (or skin canoe) and painted it handsomely. When the bidarka was done the son begged earnestly to be allowed to try the boat on the sea. After much urging the father permitted him to go with the injunction not to go far from the shore. The father himself assisted the son, and saw him safely launched from the beach into the water, and then went to his yourt or 'barra-

bora' and watched the boy lest he should go too far from the shore. The boy saw on the sea a diving bird, (diver,) followed it, and shot at it with his arrow. The diver retreated further and further from the shore. The father saw him (the boy) getting farther away, and shouted to him, but the child could not hear him; and as it was getting dark the father presently could not distinguish the boy any longer, and returned home. The boy went further and further until finally he perceived that he could not distinguish the island from which he came, and that he was far from home. He turned toward the shore, paddling slowly, admiring his boat as he went, until he was not far from the beach, when he heard some one coming after him. He increased his speed, but did not gain on the pursuer who began to throw arrows at him. The boy did not know who the person was. On another island lived an Aleüt, whose wife was the boy's sister; but as the Aleutian custom was, this Aleüt did not take her to his own island, but often visited her. This evening, as usual, he was going to his wife, he saw a little bidarka with a child in it, and pursued it to find out who it was, and discovered that it was his wife's little brother. He admired the swiftness of the boat and the skill of the boy, but continued to throw arrows at him with the intention of frightening him, and threw one so carelessly that it struck the boy's paddle, and he, losing his balance, was overturned. The brother-in-law soon came up with the boy, and endeavored to right the canoe, but without success, and so the little brother was drowned. The Aleüt wept over him, and thought at first of abandoning the boy's body where it was, but finally towed the boat to the shore near the boy's own island, and left it in a mass of kelp so that it might not drift to sea; but fearing the anger of the father, he went away without having seen his beloved wife. This was in October or November. Morning came, and the boat was discovered in the kelp; and they told the father, Kat-háya-koochák, who sent out to see what it was, and they went and brought it back. The father recognized his son's canoe, which he had built in the previous winter and summer.

"What could be done? He wept and lamented over the boy, remembering the love and care he had bestowed upon him, and directed the body to be brought into the easime, (largest house of the village,) called Ulagamak, and dressed in his handsomest parka and placed in the place of honor. He ordered that no one should make any festivity, no tambourines were to be beaten or singing done. He sent out to all his friends to say that he, his son, had been drowned, and that they should come to the funeral. On hearing this, the people of the Four Craters immediately repaired to the island of Kagámil. When they had arrived, Kat-háy-a-koochák commenced to prepare for the funeral of his son. When all was ready, and the day began, he ordered him to be taken to the old burying place, according to the Aleüt custom, with songs, lamentations, and beating of (the Aleüt) tambourines, in company with all the assembled natives, which was done. Among the people was also the sister of the dead boy, who was about to have a child. A stonelay across the path, which all had to pass in going to the burying place. There was a good deal of snow on the ground, partly melted by the warm weather. The sister, who was walking with the father behind the corpse with her face covered and constantly weeping, and was barefooted, in carelessly stepping on the stone, slipped, and fell on her back, bringing on a premature delivery and fatally injuring herself; dying very soon afterward. What could Kat-háy-a-koochák do? He went out to bury one, and, instead, had three to bury—his son, daughter, and grandson. He stopped the procession and had his son brought back to the house (barrabora) and gave orders for the funeral of his

daughter and grandson, but did not know where to put them, for the season was late, snowy, and very cold. So he gave orders to the people to clear out his "cache" (or receptacle for provisions) which was in a cave near the village. He had all his property brought out of it, had the bodies covered with wooden boards, which he ornamented with colors, and then placed son, daughter, and grandson in the cave, with lamentations, singing, and beating tambourines, as he had at first intended. He had also the little bidarka placed with his son, and everything belonging to it—paddles, arrows, &c., and many sea-otter and fur-seal skins, and other articles. He then brought out all that he had, and told the assembled people to eat and drink as much as they liked, while he, Kat-háy-a-koochák, without ceasing, wept and lamented for his family.

"After the ceremonies he told the people that he intended to make a mausoleum of this cave for his whole family, and that he wished to be placed there himself, and desired that his wishes be exactly complied with.

"Soon after Kat-háy-a-koochák himself died of grief for his family, and was placed in this cave according to his desires; with all his wealth, such as sea otter and fur seal skins, household goods, wooden dishes, arrows, spears, and other weapons. All of his family that were left behind him were buried in the same cave. And this is the end of the recitation of the name and accomplishments of the distinguished chief, Kat-háy-a-koochák.

"Since then the island of Kagánil has become uninhabited by Aleüts, and the bodies have been undisturbed until this year (1874.) And these bodies, probably, according to the saying of the older Aleüts, were placed there about 1720 to 1730, so that those first buried in the cave must have lain there 144-154 years."*

CONTENTS OF THE CAVE.

The case (17478) on which the most care and work had evidently been spent, was naturally supposed to be that of the old chief or his son. It was opened with great care and careful notes of the disposition of the envelopes, were taken on the spot. In describing the manner in which the body was encased, I have preferred to follow the operation in the manner in which it was originally performed, rather than the reverse order in which the unpacking was done.

The body was placed in a sitting posture with the knees drawn up, slightly inclined toward the right side. The major portion of the tissues and muscles had crumbled into fine dust. The skin, however, remained intact, to some extent, over the limbs, with the exception of the hands and feet. We did not uncover the remains sufficiently to determine whether anything had been inserted into the visceral cavity, as to do so would have risked destroying the continuity of the body entirely. The cranium was still covered with the parchment-like remains of the scalp, to which black coarse hair, about six inches long, still adhered. No signs of the tonsure were visible. The bones of the face were quite uncovered, and somewhat separated. The lower jaw was separated at the symphysis, and the frontal bone had sustained an apparently post-mortem

* See previous remarks in relation to the probable age of the deposit.

fracture. The sutures were tolerably well closed, except those of the lower part of the face, the supra-orbital ridges were very slightly marked, the forehead was high and not sloping; the styloid processes were remarkably long and slender, and the whole skull exhibited a remarkable tenuity, being quite translucent, and thinner, on the whole, than any other adult cranium I have ever examined. The skull exhibited the usual Eskimo characteristics, of a well marked longitudinal median ridge, and somewhat pyramidal form, but was unusually well shaped, though not of as great capacity as many crania of the same race which have passed through my hands. The teeth were but little worn, and the whole appearance of the remains indicated that they were those of a nearly adult male; from which we may reasonably infer that they could not have been those of the old chief or his son, as related in the tradition, unless the boy was older than the story states.

Passing up from behind the shoulders over the head and down upon the breast was a strip (17469) of very fine grass matting which must have taken many months to manufacture. The mesh is one peculiar, so far as I have observed, to the western Eskimo and Aleûts, which, when compactly woven, gives a twilled appearance to the fabric, and will be more fully described further on. The pattern consisted in transverse stripes, somewhat raised above the general level, and which comprised two or three stitches only in width. This matting, it should be observed, is made of the fibre of an *Elymus* (which is treated as we treat hemp or flax to obtain the fibre) and not of the crude grass itself. The raised stripes are made of the outer coat of the straw, instead of the macerated fibre which forms the body of the fabric, and were originally colored red, while it may be supposed that the rest was of the normal straw color. The stripes are about three-eighths of an inch apart in the middle of the mat, the interspaces gradually widening to an inch and a quarter toward the edges. At intervals of an inch and a half, transversely to the stripes, are inserted rows of small tufts, composed of feathers (perhaps of the *Leucosticte*, as they appear red) and of fine deer hairs, which are much used by the Eskimo for ornamental purposes. These are taken from between the hoofs of the reindeer, and are of a different texture from the hair of the rest of the animal. They appear to issue from the scent or oil glands which are situated there. I have often noticed the natives saving these small tufts, which are articles of trade among them. The tufts of the puffin (*Mormon cirrhata*) or the light white feathers which appear on the cormorants during the breeding season are also used for the same purpose, but are less highly valued, being much more easily worn out.

The edges of the mat were woven to make a selvage border and further sewed over and over with a twisted thread of two strands of sinew, which had originally fastened on a narrow strip of parchment, made from the œsophagus of the

seal, colored red. Fragments of this still adhered to the border. In this mat there were about thirty strands to the inch of weft and twenty-five of warp.

The whole body was next wrapped up in another mat of coarser texture, but more intricate pattern, which was strongly stitched together in front with finely divided whalebone or baleen. (17470.)

This mat had both longitudinal and transverse stripes. The central transverse stripe was composed of a single series of one black and two straw-colored stitches or threads, on each side of which were four rows of red stitches, and outside of these, on each side, another row like the central one, and lastly, a single row of red stitches sewed into the fabric, which last kind were in all cases of the external portion of the grass, somewhat elevated above the rest of the fabric. On each then followed an interspace of plain matting about an inch wide, then three lines of red stitches separated from the interspace by a single row on each side of alternate black and white stitches, then another interspace divided from the next by another variation of the pattern of the stripe, composed of the same kinds of stitch, and so on to the border, where there was a chequered selvage edge, with tails or strips of seal skin sewed on at the end of the stripes. Longitudinally, the stripes are crossed by wide bands, in which the ordinary threads are more or less chequered with black, and this chequered band is bordered with a pair of stout black threads on each side. Where these last cross the transverse red stripes, the red is replaced by ordinary yellow fibre disposed in the form of a cross in some cases, but the pattern is varied at different inter-sections. In this mat there were eleven double woof-threads to sixteen the other way. The package which had been thus formed was then put into a fine parka, (17471,) or long shirt, of bird skins; the neck and lower portion and arms being tightly tied up so that the contents were enclosed in a close sack. The feathers were innermost, as they are usually worn, and the outer side (being the inner side of the skins) was painted red with red oxide of iron. The skins were those of the puffin (*M. cirrhata*), which is, with the murre, almost the only species used for the purpose. The feathers of these birds are less liable to come out than those of other species, hence the preference. There is also, as a rule, less fat on the inner side of the skins, by reason of which they are more easily dressed. In this case the feathers were still firmly attached and the skins still in good condition.

The outer side of this parka was ornamented by a band or yoke passing over the shoulders and completely across in front. The lower edge of this was ornamented with a fine long fringe, and, at intervals, long slender strips of sea otter fur were inserted as pendants. The seams, also, were all quadruple, the edges of the skin turned back and fine strips of hair seal skin inserted, three-sixteenths of an inch wide, with the hair cut evenly, as short as possible.

To describe in detail the wonderfully fine work contained in the ornamental

yoke, above mentioned, would take a very large amount of space, and, I fear, give but a very inadequate idea of it even then. It needs to be carefully studied to be appreciated. In order to give some notion of it it is necessary to describe the materials used in similar but less delicate work by the Innuit of Norton Sound. These ornamental bands are commonly used by all tribes of the Eskimo stock, though none approach in perfection that work done by the early Aleüts. Something similar, but of a totally different style, is used by the Tinnch Indians, whose material is restricted to deer skin, moose hair, and porcupine quills. The Innuit girl, for her work bag, requires the skin of the cod, or other smooth-skinned fish, stretched and dried, which presents somewhat such an appearance as grey marbled paper. Next, the skin of the young hair-seal, scraped and dressed very thin, and made as white as possible. Part of this has the hair cut evenly and closely till it is not longer than the pile of silk velvet. Another part is entirely deprived of the hair, and is as white as fine kid. Then of the gullet of the same seal is made a stout parchment, either white or yellow, or frequently colored red, black, or green with native pigments: oxide of iron, charcoal and oil, and a green mould found in decaying birch wood (*Peziza*.) Then the skin of fur animals is taken, and, while the soft fur is untouched, the inside, after being dressed, is colored as above; a narrow strip thus forming a pretty fringe. The white belly, throat, and leg patches of the reindeer, in summer, are carefully selected for those parts with the whitest and finest hair, which is cut to a uniform shortness. With these, and plenty of whale or deer sinew for making thread, and with needles, her repertory is nearly complete. These articles are cut in narrow strips; the finer the work the narrower must be the strip, or they may be made, by cutting into little squares, into a chequered pattern; and even here the ornamentation does not stop, for in the seam itself are frequently inserted feathers or deer hairs, such as have been previously described. Very few civilized work-women could rival the finer kinds of this work, even with the most delicate needles, and when we recollect that the ancient Aleüt women worked with awls formed of bird's bones, ground on a stone, the delicacy and minuteness of their stitches becomes more wonderful still. In the present case the yoke is an inch wide, exclusive of the fringe, and one of the strips is a quarter of an inch in width, leaving for the twelve other strips, of which it is composed, (and which are to be distinguished only by the aid of a glass,) scarcely more than six-hundredths of an inch each. Two of these strips are further ornamented, one being black with white reindeer hair stitches so intersected as to form a succession of small white crosses on a black ground; the other with the intersections of the white stitches at the upper edge, instead of the middle, forming a continuous zigzag line on a red base. The order of the strips, reckoning from above, is as follows: 1, finely trimmed hair-seal with the hair on, but cut to five-hundredths of an inch in length; 2, red colored parchment; 3,

like No. 1; 4, like No. 2; 5, black, with white crosses; 6, red parchment; 7, like No. 1; 8, like No. 2; 9, quarter inch strip of dark red parchment; 10, parchment of a lighter red; 11, parchment blackened with something containing shining grains, like micaceous oxide of iron; 12, zigzag line, in white, on red parchment; 13, strip of hair-seal skin with the hair trimmed as before on its lower half, but removed from its upper half, which is colored red. In the seam between these last two strips are inserted the filaments of which the fringe is formed. These are of young hair-seal skin cut seven inches long and one thirty-second of an inch wide. The hair is cut as close as possible, and, at short intervals, removed entirely, giving the filament a jointed appearance, like an insect's antenna. At the free end a minute portion of the hair is left uncut, forming a little tuft. These filaments are inserted in pairs (eighteen to the inch) in the seam, or thirty-six in all to the inch. The strips of sea otter skin, with which the neck of the parka was trimmed, and also those inserted into the fringe, &c., still retained a bright glossy appearance.

Outside of the bird-skin parka was next placed a strip of tolerably fine matting, (17472.) extending from under the back, up over the head, and down over the face. A small and exquisitely fine mat, (17474,) about twelve by fourteen inches, was laid over the breast, and then, from side to side, it was rolled in a larger and much coarser mat than any yet mentioned (17473.)

The face cloth was ornamented with longitudinal black stripes of two or three threads each, chequered by the normal straw colored threads of the warp. The black stripes were about six inches apart. These were crossed by transverse stripes—composed of six threads, the two outer pairs red, and the inner pair chequered black and white; and of four threads, the two inner red and the two outer chequered—alternately, at intervals of two and three-fourths inches. In the middle line short tufts of black fibre, on each side of the transverse stripe, were introduced, and here, as in other cases, the red threads were replaced by white, varying the pattern. It is evident, from careful inspection, that these red threads were sewed in after the mat was finished, and not originally woven in. They also are not of the fibre of the grass alone, but retain the outer surface of the polished straw. The black threads, on the contrary, form part of the primitive fabric. Here we have fifteen warp threads and six pairs of woof threads to the inch.

The breast mat is another marvellous specimen of grass weaving. The stripes are all transverse to the fabric. There are six principal stripes across the middle portion, composed of three inner red, two outer yellow, and two outermost black threads of woof. Between each pair of primary stripes is a secondary stripe of two red threads enclosing one chequered, with one black and two white stitches, alternately. Between the primary and secondary stripes is a tertiary stripe of two chequered threads, alternately black and white single stitches, enclosing a

single red thread. The six primary and intercalated stripes, with the body of the fabric, cover a space of eight inches, arranged at exact intervals. Outside of this series, at each end, are three more of the tertiary stripes about an inch apart. Longitudinal to the fabric are ten rows of tufts of the crimson-tipped feathers from the breast of the gray-necked finch, (*Leucosticte griseinucha*), mingled with the fine soft deer hairs before mentioned, inserted at the edge of the stripes. The middle (secondary) stripe has tufts on each side, pointing respectively toward the top and bottom of the mat. All the tufts to the stripes above it are inserted on the upper side and point to the top of the mat; and all below it are inserted on the lower sides of the stripes and point to the bottom of the mat. The lateral edges of the mat have a selvage edge, but, in addition to this, to obviate fraying out, the whole was bound with a dark colored strip of parchment. Where the tufts join the stripes white threads are inserted into the red lines, as in previous cases. There are eighteen threads to the inch longitudinally and twenty-four transversely.

The outer mat of all is of much coarser texture and of a different mesh from the others. Previously the warp-threads have been composed of bundles of fibre crossed by similar double woof-threads. The two threads of the woof alternately passed above and below the warp-threads, which, in weaving, were separated in halves. In one line the adjacent halves of adjacent threads of the warp were caught in the twist of the two woof-threads, and in the next the separate halves were caught together again, and, this alternation being constant, the spaces between the threads, if stretched apart, would be of a lozenge shape. The woof-threads, as they crossed each other between the threads of the warp, received a single twist.

In the outer mat, however, the bundles of fibre composing the warp are kept constantly intact, and the apertures, therefore, would be rectangular.

In this mat the only pattern consists of large squares, formed by two or three black threads of warp about seven inches apart, and cross lines, of which one of the pairs of woof-threads is black; the other pair, one black and one white; forming a line, one half of which is chequered as the black or white thread alternately comes to the top. In this mat there are ten threads of warp and three pairs of woof-threads to the inch.

The body, as now encased, formed an oblong, somewhat irregularly, shaped bundle. The case into which it was placed must now be described.

A stout bar of wood sixteen inches long and about two and a half inches thick, with the angles rounded off, formed the basis of the structure. Into holes in this bar, near each end, were inserted two staves, one of each pair two feet long and the other three and a half feet long.

The long and short rod at each end were put in and lashed with baleen strips at an angle of 30° with each other, and also diverging somewhat outward. An

elastic strip of wood was then bent so as to make a hoop of somewhat oval shape, which was securely lashed with baleen thongs to the four staves, at the points where they intersected it. Then to form a sort of bottom to this receptacle, inside the staves and just above the transverse bar, a large kantag or wooden dish, of the kind made by the Eskimo of the mainland, was securely lashed, by passing thongs through holes cut in it for the purpose. Over that portion of this frame which was above the kantag, hair-seal skin with the hair turned to the outside was securely sewed. It is at once evident that this frame could not stand alone, except by resting on the side, but it was not intended to rest on the ground, but to be suspended in the air; for which purpose two very stout and strong loops of sinew braided in square sennit, repeatedly doubled and served over and over, were attached to the sides of the oval rim. The interior was then lined with dry grass, and in the bottom another, smaller, kantag was placed, which, when examined, was full of something resembling ashes. The bundle containing the remains (which had, as was their custom, been thoroughly dried beforehand, though whether the viscera had been replaced by dry grass, as is said to have been the practice, we did not determine by inspection) was then inserted, the end in which the feet were situated being placed in the kantag. Then all around the bundle dry grass was firmly packed. Over the body were laid, first, three large fine sea-otter skins, which still retained the hair in tolerably perfect condition. Over these was laid another parka of bird skins, folded up, and much less elaborate than the one previously described. Then over this a number of seal skin loops attached to the rim of the frame were securely laced together with a cord made of sinew. The top was then covered with hair-seal skin sewed on to the edge of that which covered the sides of the frame; over this was laid a piece of water-proof stuff liked that used for kamlaykas or gut shirts. This was in a very much injured condition.

In order that the lower portion, which was only confined by the seal skin sewed over the frame, should not burst open with the weight, the following precaution was taken: A broad strip of thin wood (one-fourth to three-fourths inches thick by seven and one-fourth inches wide) was steamed until pliable and bent into a somewhat rudely rectangular ring, and the two ends, which overlapped about four inches, were pegged together with wooden pegs. To give an ornamental finish to the whole it was painted red, and four pegs—shaped like a horseshoe nail, with rather large heads—were inserted at the edge of the overlapping end. These pegs were made of walrus ivory, and blunt at the point. As they could exert no tension on the wood, toward holding it together, it is probable that they were intended solely for ornament. Through four holes cut for the purpose, strong cords, made of sinew, were lashed and laced through holes made in the seal-skin cover to the wooden rim of the frame. The whole wooden band was then drawn up tightly and encircled the lower portion of the

case, adding greatly to its strength. Over all this was wound a net, which appeared to have seen previous service. It was made of sinew twisted in two strands, and with a mesh of about four inches diameter. The lower edges of the net appear to have been hitched over wooden pegs, which project from the inner lower edge of the wooden band above described. Over the first net, a new net composed also of sinew, but of three braided strands, and of six-inch mesh, was again wound and secured with strong cords of sinew, braided in what seamen call "square sennit." The braiding was most evenly and beautifully done, equal to any modern work of the kind, and, in most places, the cord still retained much of its original strength. Under the net was inserted a piece of wooden body-armor, (17249,) composed of small round rods of proper size, united by sinew cords, and with nicely carved wooden pieces about the arm holes. This is the only piece of this aboriginal armor known to be in existence. It was fastened behind with two loops of sinew, into which wooden buttons were inserted. The small rods of which it is composed were about three-fourths of an inch in diameter, and painted red.

This armor, slight as it was, must have been a tolerably good protection against the bone and stone arrow heads of the natives. There was also found, stuck in the netting of this mummy case, when received at the Institution, a short crutch-handled stick, with the point a good deal worn; evidently one of those which the natives still use to push their bidarkas about with in shallow water. (17443.)

Whether it was originally where we found it, is not certain, as the mummies had been subject to much handling and inspection in San Francisco before they were forwarded to Washington. No information of consequence was received with them in regard to whether any of them were still suspended when found, and the absence of any statement in regard to the matter, renders it likely that they were not. The cords by which they were hung up, in the course of years, would be likely, and would be the first portion, to give way. Yet that they were originally so elevated is beyond doubt, as all of the packages are provided with loops for the purpose, and we know by the accounts of the early voyagers, that the natives were particularly careful to suspend the bodies of those for whom they had special regard, in such a manner as to prevent their touching the ground.

Of the packages containing remains, two were given to the California Academy of Sciences, and two others were so much injured that only the crania (which will subsequently be referred to) were collected. Of those remaining, three were of infants and the others of comparatively mature individuals.

I. (17482.) Rolled up very compactly in tanned sea-lion skin and lashed with "square sennit" of large caliber. The viscera had evidently been removed, but the muscular and cutaneous tissues were in tolerable preservation. Under the

lashings, which were not disturbed, were tucked feathers of some raptorial bird. These had been trimmed off, and colored red with some pigment. The individual was apparently adult.

II. (17481.) Wrapped in a coarse but neatly made grass mat striped with black strands, and lashed with a cord half an inch wide, made of sinew braided in three strands. The cord for suspension was made of similar braids of dry grass, exactly similar to that now in use among the Aleüts for various purposes. It was three-quarters of an inch in width. The body, of an adult individual, probably a male, was wrapped in a common bird-skin parka, and another mat similar to the external one.

III. (17479.) This one was in a first-rate state of preservation, even the nails of the fingers and toes being *in situ*. The viscera had evidently been removed through the pelvis, as the cutaneous tissue of the abdomen was intact, while the pubic region showed signs of having been opened. There were no evidences of any substance having been introduced into the interior of the body. There were no incisions for labrets nor for earrings. The hair was black, and about seven inches long—well preserved. Traces of a light moustache and beard were visible. The bones of the left fore arm had been broken in order to force the hand into a position by which the package might be made more compact. No other injuries were noticed. The individual was a male of middle age, and had lost several teeth. The coverings were in every respect like those of Nos. V and VI, but were in bad condition, so that it was judged advisable to remove them entirely. It was wrapped in a plain bird-skin parka, rolled in a rough mat, lashed with sinew braided in three strands. Over this was a cover of sea-lion skins deprived of the hair, and sewed together with rough untwisted sinew.

IV. (17480.) A child of four to six years of age. Inner covering the usual bird-skin parka, surrounded by a pretty good piece of matting; the whole covered with dressed seal skin. The cover was made of a number of pieces sewed together, but the edges did not quite meet in front, where the matting was exposed. The whole was lashed with strips of raw, untwisted whale sinew, and a little very large "square sennit."

V and VI. (17485-6.) These two were adults, and had evidently been laying, one upon the other, for a long time, with only a coarse mat between the packages. They did not present any evidences of having been suspended. The coverings were bird-skin parkas covered with a coarse mat, enclosed in seal hide, lashed with "square sennit." That one which had lain lowest, was not so well preserved as the other. They were apparently females.

VII. (17487.) Was covered with sea otter skins, sewed up very strongly in seal hide and lashed with "square sennit" of the largest size, made of whale sinew. The coverings were not removed sufficiently to admit of examining the remains, which appeared to be those of a youthful person.

VIII. (17484.) Contained the remains of a small infant, of which the tissues were reduced to dust. About the bones were traces of bird skins. Outside of this were sea-otter skins, repeatedly doubled and lashed on with seal hide thongs. Outside of this was a covering, apparently of fox skin, but the skin had become so much injured that only a mass of matted fur remained. This had been secured with "round sennit" of four strands and braided sinew of three strands. The outer case, if there had ever been any, had been removed.

IX. (17483.) Contained the remains of an infant of two or three years of age, and was originally very carefully prepared. The case consisted of a wooden hoop forming the front, two parallel short sticks at the bottom, and two longer ones at the back, severally lashed to the hoop at one of their extremities, and to a short transverse stick (forming the posterior edge of the bottom of the frame) at the other. Over the back, sides, and bottom of the frame was sewed hair-seal skin, with the hair turned inward. The sewing was done with thread twisted of two fine strands of sinew. The body had been wrapped carefully in matting, covered with sea-otter skins, then packed, with twisted hanks of dry grass, firmly into the case, and the front of the latter covered with a piece of exceedingly fine matting. This was ornamented with longitudinal and transverse stripes similar to those described in the large mummy case, and with white crosses worked into the fabric at the intersections of the stripes. The lashings were of square and round sennit.

X. (17475.) Contained the well-preserved remains of a child about a year old, wrapped in a piece of the material of which the gut shirts or kamlaykas are made. This consists of the entrails of sea-lions or seals, washed, split, and dried into a glistening kind of parchment. These strips are then sewed together with double seams, and, usually, narrow strips of red parchment are sewed in the alternate seams or parts of them by way of ornament. This forms a light, translucent water-proof material, very tough when damp, but rather brittle if very dry.

Over the upper part of the body a fine, small mat was laid resembling one already described, and like it, ornamented with the red feathers of the *Leucosticte*, and the light hair from between the reindeer's hoofs. The head of this specimen was gone, but the tissues were well preserved, and from certain impressions in the dry skin of the back, it would seem to have been laid on a coarse piece of matting or basket work. It did not seem to have ever been tied up, or, if it had, no traces of the envelope or lashings remained.

The two skulls referred to had evidently been taken from bodies of more recent date than any of the others. This is confirmed by the state of the tissues which did not resemble the others, in color or consistency, being fresh and firm and still retaining somewhat the fresh color of recently dried animal matter. The skull of one, (17477,) a female, bore other testimony to its later date, as the

frontal and nasal bones were much affected by a species of caries, evidently the result of syphilitic or scrofulous disease. If the former, it was the result of intercourse with the Russians, and the individual may have belonged to a period twenty or thirty years later than those previously described. The hair, originally black, had faded to a light brown, and was very short.

The other skull (17476) was that of a male, and chiefly remarkable for its great breadth as compared with its height, and for possessing, in addition to the usual coronal ridge, a well-marked transverse ridge across the skull from side to side, somewhat behind the ears. Some of the hair still remained, and was long and black. The teeth of both were much worn down, and in the female skull the anterior molars had been worn until the nerve cavity was fully exposed, and signs of ulceration were exhibited about the fangs of the two first molar teeth. The cylindrical shape and soft character of the enamel, which rapidly wears away, is a characteristic of the Innuited teeth. It is due, not so much to the mixture of gritty substances with the food, which does not often occur, as to the peculiar character of the teeth themselves, and the great use that is made of them by most of the Eskimo in chewing sinew, seal-skin line, &c., to prepare them for various purposes. In skinning an animal, stretching or hauling taut a line, or twisting or braiding a cord, the Eskimo takes it in his teeth.

With these human remains were various articles, which were also forwarded, and are here briefly catalogued.

1. (17443.) A pushing stick with a crutch handle, carved and painted red on the top of the handle and on a broad groove around it. On the side of this was engraved an oval, with short lines perpendicular to the circumference, extending outward from it. This was probably a mark of ownership, such as most natives put on their weapons and utensils. A string of two-thread twisted sinew was pegged into a hole in the border of the oval to secure the implement to the bidarka at sea.

2. (17444.) A portion of the keel of a bidarka.

3. (17454-17459.) Two small and four large kantags of the usual character, with internally concave bottoms and perpendicular sides, bent into an oval or rounded rectangular shape by steaming, and secured by wooden pegs. Also one high square kantag, (17453,) with very thin light sides, such as the natives use for picking berries in. These are precisely such as the continental Innuited use to-day, except where the traders have introduced tin pails and dishes. They were probably derived from the mainland, and obtained by barter, as the inhabitants of the Island of St. Lawrence and the Diomedes obtain their kantags from the continental Innuited at the present day.

4. (17445.) Remains of a common wooden visor, such as the Innuited use at present to protect their eyes from the glare of the sun on the water when in their

kyaks. It had been smeared with black paint, and an oval pattern, bordered with two lines, had been scratched through the black paint into the white wood.

5. (17464.) A fine and carefully made basket about six inches deep and twelve inches across, made exactly like the modern ones. It had three red stripes around the upper border, to which was sewed a strip of fur-seal skin. It was laced up with a thin strip of baleen, and had a short piece of square sennit, rudely knotted, attached to it.

6. (17461.) A little coarse grass basket, with the straws at the upper edge turned and woven in so as to form a selvage border. It was about three inches high and two in diameter. It contained some shreds of dry sinew; a dried orchis root, such as the natives still eat; a piece of bird skin, with a strip of fur-seal skin sewed to it, and a bracelet of rings made of bird's claws, (17264.) This last is exactly similar to one seen by me among the Magemūt Eskimo of the north end of Nunivak Island, in 1874. I purchased a little carved box, and in it were several of these rings, as well as the yellow granulated portion of the bill of *Mormon corniculata*, the horned puffin. I could not then imagine what they were for, nor do I yet know the use of the pieces of the bill. Doubtless they are used in some way for purposes of ornament. The rings are made by pulling off the horny portion of the sharply curved claw, and inserting the point of one into the core of another, until a ring is formed; as children are wont to make rings of honeysuckle and larkspur flowers. When a sufficient number of these rings are collected, they are strung into a bracelet.

7. A number of loose articles which had formerly been in one of the baskets. These included several loose pieces of red pine bark, (17267,) some of them with resin adherent to them. This may have been used in lieu of wax on their threads. The bark had been whittled, and I found by wetting it and rubbing it on a clean piece of pine wood that it communicated a red stain to the wood. It may have been used for this purpose also, and perhaps as tinder besides, as one of the pieces was burnt in several places. It is almost needless to say, as no timber exists on the islands, that this must have been derived from drift-wood, carried from the coast about Sitka. The Yukon and Kuskokwim regions possess only spruce trees which have not this kind of bark.

A small roll of birch bark, (17268,) also derived from drift-wood, but probably from the Yukon region. What they did with birch bark I am unable to fully explain, but they preserved it very carefully. It is almost indestructible by decay, on account of a resinous principle which it contains. I found a little case made of this bark containing metallic pigments, red clay-ironstone, and graphite, in a very old pre-historic deposit in the Amaknak cave. This deposit is not considered in the present paper, as it belongs to another, and much older era; but in this case also, the birch was in close proximity to a lot of awls and women's sewing tools which lay by a female skeleton.

Four sea-lion teeth, (17256.) I think the hard ivory which these afford was used for some kinds of sewing awls which were affixed to a handle. I have found these teeth chipped in such a way as to make it evident that something was about to be made of them when the work was interrupted. They split rather easily. The teeth of the Orca or killer-whale, the small teeth of the walrus, and the teeth of the sperm whale were all formerly used by the islanders for various purposes, especially for carving little images or toys.

Four pieces of gypsum (17263.) This comes from near Nunivak Island, at least that is the only locality where the natives have it in any quantity. They use it for labrets and other ornaments, and inlay their kantags very prettily with lozenge-shaped pieces of it. These pieces were all quite small, and intended for beads. These were usually bored before the surface was shaped, and, in the present case, one of the pieces had been bored nearly through, a funnel-shaped pit being made on each side.

One stone arrow or lance point, (17265,) about an inch and a half long, with short barbs and broad haft. It was made of a black siliceous stone. This was the only portion of a weapon found, but the Rev. Father Innokenti told me that there were formerly many seal lances in this cave. The Atka men, who principally hunt on this island, from time to time losing arrows which they could not replace in any other way, and being in no fear of ghosts, were used to replenish their stock from the cave, until the supply was exhausted.

Two beads or bugles (17261) made of the metacarpal bone of a bird's wing, and about half an inch long; also one of the bones from which they were made, (17262.) Two rough pieces of bone, one of which had been sawed longitudinally, (17252-3.) A small ivory pendant (17259) of a figure-of-eight shape with one lobe half an inch in diameter and the other an eighth of an inch; quite flat, and with a small piece of sinew thread tied round the narrow part—evidently an ornament, such as the natives attach to the ends of the strings by which they tie up tobacco and other small bags.

An ivory figure of a spotted hair-seal, (17257,) in a life-like attitude, about an inch and three-quarters long. This was found, so the captain told me, in a little child's seal-skin boot, on which the hair was perfectly preserved. The boot has not come to hand. Another rough figure of some four-footed animal (17258) with a forked tail, perhaps used for smoothing down the asperities of their sinew thread by drawing it through the sharp furrow in the tail. The natives on the mainland use a similar instrument for this purpose. Three curious implements, (17260,) two of them an inch long, and the other two and a half inches long, made of ivory. I have never seen anything like these elsewhere. They are shaped like a small arrow head with the point curved to one side, with one or two deep notches on the concave side, and three or more much smaller ones on the convex edge; a sharp point; a square haft with a notch or two on the convex

evidently for aiding in making it fast to a handle. I think they might have been used in some way connected with sewing work. I believe that the last four ivory articles were found in the boot along with the seal image.

A wooden doll (17446) very rudely made, without arms or legs, and which, by the resin adhering to it, might have once been inserted at the base into something else, perhaps a model of a *bidarka*. Such toys are frequently seen among the native children. Where the left arm might have been, some one had cut on the figure a rude pair of eyes, a nose, and mouth. On the face of the doll two lines extend backward and upward from the corners of the mouth, which may be intended to represent some form of tattooing.

One rude amber bead, (17270*a*), evidently of native make, on a sinew thread. The amber was obtained from the lignite beds, which are reported on the islands of Amchitka, Atka, and Unalashka, and may exist elsewhere. We know that amber was held in great esteem by the early natives, and extraordinary value set upon it. This bead, therefore, may have represented in value a good many sea-otter skins.

A piece of parchment made from the œsophagus or stomach of the seal, colored red. Eight strips of hair-seal skin with the hair on. The purple-blue throat of a merganser. Two pieces of puffin skin with the feathers on. The skin of a little auk (*Phaleris*.) The scalp of a tufted puffin and one of an eider duck. Another puffin scalp, reddened inside. The skin of a gray-necked finch (*Leucosticte*), which furnishes the red feathers for the embroidery. A strip of fur-seal skin. Half a dozen pieces of parchment or tanned sea-lion skin. In short, the odds and ends of the work bag of an Aleüt woman. (17271.)

8. A little square piece of grass matting (17468,) rolled up, and containing a little roll of birch bark; three little pieces of hair-seal skin; a little bunch of the hairs from the reindeer's hoofs; another, of the feathers from the tufts of the puffin; a little bit of skin from the belly of the winter reindeer, with the hair of pure white; and, lastly, a bunch of brown and gray hair, quite fine, and apparently human;—all these tied up neatly with a sinew thread.

9. A little grass fold, (17466,) like those the natives use for carrying needles and thread; measuring when folded, five and a half by two inches. Neatly woven and empty.

10. A comb (17251) formed by lashing by the middle, thirteen pegs of wood, sharpened at each end, to a tolerably stout stick with sinew thread of two strands.

11. A miniature grass basket; a toy, an inch and a half long. (17462.)

12. A rather coarse grass basket, (17460,) woven with loops about the circumference of the edge, one black stripe around near the top, and two parallel rows of black tufts inserted into the fabric a little lower down.

13. A shallow, but well and closely woven, woman's work-bag or basket of

grass, (17463,) with brown puffin-feathers woven into the centre of the bottom. It contained two chipped sea-lion teeth, many loose shreds of sinew, parchment, birch bark, some old twisted sinew threads and loose feathers; two rough bits of stick tied to the ends of a sinew braid about a foot long; a clipping of gut-shirt stuff, with a red stripe in it; a neat sinew thread, attached at one end to a little piece of hair-seal skin with the hair on, cut into two tails, and, at the other, to a narrow strip of embroidery (17488) about three and one-eighth inches long and a quarter of an inch wide, with one or two small *Leucosticte* feathers inserted into the edge. In this quarter of an inch are ten longitudinal rows of stitches. The white stitches are made with deer hair, of the white winter coat. The stripes are—red parchment, with distant white stitches in the form of triangles; then three rows, the middle largest, of white stitches on a yellowish ground; lastly, the middle stripe is black, with white triangles stitched in on each side, alternating so as to give the black ground the appearance of a zigzag line. The string is about a foot long, and was probably intended as a fastener for some choice little work-bag. On the strings of such bags the Eskimo invariably have a pendant of some kind, at the very least at one end. The specimen is a lasting testimony to the taste and skill of the unknown workwoman.

14. A fillet, (17465,) made of black human hair, woven at one edge with sinew thread. I have seen similar fillets at Nunivak and on Norton Sound. They are worn with the selvage edge turned downward, and are usually bound around the head. The attraction consists in the gentle waving of the hair during the motions of the dance.

15. A very rough bone knife (17254) and equally primitive handle, another still less finished, but without any handle, and a piece of roughly hewn bone, apparently intended to be made into an awl.

16. Four pieces of pumice for dressing skins. (17266.)

17. A dice-box-shaped piece of fine-grained hard wood, (17250,) apparently Alaska cedar. This is used for cutting the hair to an even length, on strips of skin used for trimming. The strip is wound spirally around the nearly cylindrical bit of wood, fastened, and then, with a sharp knife (stone or iron,) the hair is evenly trimmed. A flat board, on which the same might be done, and with the same amount of available surface, would be inconveniently large and awkward to carry about. The dimensions of this substitute are five inches long by one and a half in diameter.

18. A gut bag, (17467,) about fourteen by twelve inches, ornamented with stripes of red parchment and a border of hair-seal skin with deer-foot hairs inserted into it. This is precisely similar to work bags now in use. It only contained a strip of trimming, as bright as the day it was made. This was an inch and three quarters long, composed of red and white parchment and a purple duck scalp.

19. Five toy kantags, (17448-52,) varying in dimensions from two by one and one half inches to three by four inches, evidently the table service of some child, rudely carved out of single pieces of wood. Also a nearly oval dish (17447) about three inches long, with flat up-turned handles.

20. A bit of wood, (17255,) curiously carved, and resembling pieces which are used on bidarkas under the seal-skin lines which extend across the top of the canoe. By moving these about, the lines are lifted so that a paddle or an arrow can be pushed under them and thus secured at sea. If this is the same thing, it is only a miniature child's toy. I can think of no other explanation of it.

21. A curious kind of narrow fillet or braid, (17269,) consisting of a twisted thread of some animal substance resembling wool or the under fur of a dog or fox, wound alternately over each of two parallel cords of sinew, and crossed between them, so as to resemble, externally, a braid of three strands, though only one thread is actually employed.

This completes the list of the articles found in the cave. It is hardly to be expected that the discoveries should in all respects confirm the literal accuracy of the tradition which has doubtless grown in precision with the lapse of time, as it was passed from one to another. The identification of the individuals mentioned in it was hardly to be hoped for. If the large case, which has been described in detail, was that of the old toyon's son, he must have been older than the tradition asserts. It must be borne in mind also that two of the packages were not forwarded to the National Museum, and one of these may have been that of the child in question. Nor do either of the young children mentioned appear to be of sufficiently immature development to justify the assumption that they represented the prematurely-born infant mentioned in the story.

Apart from all this, the fact that all the contents of the cave examined show no trace of any influence arising from civilization (if we except the diseased cranium mentioned) is sufficient to put it beyond a reasonable question that the interments were of at least as early a date as that I have assigned to them.

I may now consider the material which has accumulated relative to the Kaniagmūt cave-burials. We learn from Lisiansky and others that the whalemen of the tribe were considered a peculiar caste among their countrymen. Although held in high esteem for their courage and skill, and for the important contributions to the sustenance of the community which were due to their efforts, it is related that, during the whaling season, they were considered unclean and did not mingle with the rest.

The profession was hereditary, and the bodies of the whalers were preserved in the same manner as previously described among the Aleüts, and placed in caves the locality of which was kept secret, and was known only to those of the same family who were interested in the remains. This precaution was necessary,

as a certain luck or success in the profession was attributed to the possession of the bodies; which increased in direct ratio to the number of such articles possessed by the particular individual. Hence the hunters did not hesitate, if they could without detection, to steal the remains belonging to another whaler, thus hoping to diminish his success and increase their own. It is known or asserted by the natives that such bodies still remain intact in some of these caves, though their precise locality is known to few. M. Alphonse Pinart, while in Kadiak, attempted to discover the retreat of one which was particularly spoken of, but was not successful. Afterward the United States Deputy Collector of Customs for the port of Kadiak, Mr. L. Sheeran, and another person succeeded in discovering and carrying to St. Paul's the mummy in question. It was discovered, through a peculiar superstition, the existence of which is a curious commentary on the orthodoxy of these nominal Christian converts of the Greek Church.

It appears that the natives of Ugámuk Strait, Kadiak Island, near the situation of the cave, were accustomed to take the first berries, oil, and fish of the season, into the cave where this mummy was placed, and to leave them there; declaring that, when they returned a few days after, the mummy had eaten the food, for the dish was invariably empty. In order to propitiate the spirit of the ancient whaler they unconsciously furnished the marmots and spermophiles with an acceptable meal.

By watching in the shrubbery when the offering was being carried to the cave its locality was discovered. Beside the well-preserved body to whom the offerings were made, another, much decayed, was found, of which the skull only was brought away.

While at Kadiak, in June, 1874, Mr. Sheeran was kind enough to show the remains to me, and to present, to the National Museum, the skull above mentioned. (17489.)

The mummy had been dried in a squatting posture, with the knees drawn toward the breast. It was well preserved, and, when found, only dressed in the remains of an old gut shirt or kamlayka. The hair was black and tolerably long. In the hand was held a slender stick, to which was attached a narrow slate lance-head about an inch wide, sharpened on both edges, without barbs, and simply pointed. It was five or six inches long. On the point of this lance-head was transfixed a rude figure, cut out of tanned seal skin deprived of the hair; this was said by the natives, according to Mr. Sheeran's account, to represent the evil spirit, whose enmity the dead man averted on being propitiated with the offerings of food. The natives of St. Paul's were in wholesome awe of the deceased; would avoid passing at night the out-house in which it was kept, and, on one occasion, complained to Mr. Sheeran that he did not feed the dead man

sufficiently, as he had been noticed by the town watchman (a native) prowling around, on a stormy night, through the town! presumably in search of food.

The Kadiak natives made great use of masks in their dances and festivals, especially those in which the Shamans took part. They are said to be deposited in many places with the dead. The localities were not stated, and our short stay at Kadiak precluded any attempt at a search.

It is stated by some of the half breeds, who pretend to be acquainted with the native traditions, that it was a not uncommon practice to dry the bodies of the dead in some natural attitude, and to place them in a cave or rock-shelter dressed in gay attire, and arranged as if in some occupation characteristic of the individual's pursuits in life. Thus, women were placed as if sewing, or nursing children; noted hunters, in bidarkas engaged in transfixing the effigy of a seal or otter; or old men as occupied in beating the tambourine, their recognized occupation in the dances and festivals of all the Inuit. By them were placed the masks which they wore in life, or sometimes the individual was dressed in his wooden armor, arrayed in his mask, and supplied with wooden models of his implements or the game or fur animals which were his favorite pursuit. For some reason or other, actual weapons or implements were rarely placed with the dead, but were represented only by wooden models.

While we had no opportunity of examining any Kaniag'mūt caves of this kind, an opportunity was offered at Unga, one of the Shumagin Islands, to examine a noted locality for these remains. The present inhabitants of the Shumagins are true Aleüts, and have been reported as such since the Russian occupation. Hence I ascribe the agreement of what we discovered in the Unga rock-shelters with the descriptions of the Kaniag'mūt modes of interment, to the close proximity and greater intercourse of the Shumagin Aleüts with the former people.

The locality mentioned is near Delaroff Harbor, Unga Island; and the cave, so-called, consists of a series of rock-shelters formed by the breaking down of the perpendicular basaltic bluffs into a huge talus of immense broken rocks. Between these exist an interminable series of crevices, sometimes forming chambers of some magnitude, but more often narrow and intricate. In some places the shelter was sufficiently good to ward off any rain or snow, and in the largest of these, covered by an immense block of basalt, we found the greatest number of remains. Others were scattered singly or in small groups in various other suitable crevices or nooks under the rocks. The remains had been visited by several persons at different intervals before our visit, and had been considerably disturbed. M. Pinart, especially, had secured the cream of what was contained there, though much that was valuable remained behind. It seemed also, as if the frequent earthquakes common to the region had had their share in disturbing the deposits, especially from the position of some of the crania, which took several hours of hard labor to extract from the crannies in which they

were wedged. Large numbers of fragments of rock had also fallen from above, which aggregated several tons in weight, and had to be removed piece by piece; a work of no little magnitude.

The materials, after they were removed, and the dèbris carefully searched for anything remaining, were hardly of a character to afford a basis for a general description of the method employed in treating the dead. Indeed we would have been able to comprehend the purport of but little of what we collected, without the assistance of the information we had received from the natives on the spot, and those at Kadiak, and elsewhere.

The collection comprised only a single implement, a sharp-pointed piece of bone, which looked as if it might have been used in making some of the more delicate portions of the carving.

The remainder consisted entirely of wooden carvings (14941 *et seq.*) and human bones, particularly crania, of which thirteen of various ages were collected. Several mummies wrapped in matting and seal skin, similar to those described from Kagámil, were observed in another crevice. The crania only were taken, as the rest of the remains presented nothing very remarkable and were very much decayed. The remains of the cases of several mummies of children were found in the same place and some bits of fine matting.

The wooden carvings presented a great variety of forms, of which it seems desirable to make only a general enumeration. Most of them were of a cork-like consistency from great age; nearly all were injured or broken; some crumbled under the brush used to remove loose dirt from them. The best preserved specimens, as previously related, had been removed by others. In 1868 Captain Chas. Riedell gave me a perfect mask which had been obtained from this locality and is now in the National Museum. In 1873 I obtained a few more in good condition and a very large number of fragments, of which I collected only the better preserved pieces. The nose, being the thickest portion, is longest preserved; and there must have been fifty noses among the dèbris which deeply covered the floor of the crevice.

These masks were all different from one another, but made on one general type. They would average twenty inches in height and sixteen in width if the convexity be taken into account. They were nearly all similar in having a broad thick but not flattened nose, straight and not projecting eyebrows, thin lips and a wide mouth, into which little wooden teeth were inserted. They also agreed in being painted in various colors, usually black and red; in having bunches of hair pegged in to indicate a beard; sometimes hair across the upper edge of the forehead; in being pierced only in the nostrils; and in having the ears large, flat, and usually pegged on, much above the normal plane in human beings, generally at the upper posterior corners of the mask.

Varied patterns were lightly chiselled or painted on the cheeks in many cases.

A small round bar extended from corner to corner of the mouth, inside. This was held in the teeth, as the marks of biting testify, and a further security was provided in the shape of a band passing behind the head. These masks exhibit great ingenuity and skill in carving, especially when we consider that they were made with only stone and bone implements. Various holes about the edges of the mask were used for inserting stiff feathers, trimmed and painted, with little flat wooden pendants, gaily painted, attached to them. Of these we obtained a great number and variety, and could not determine their purpose, as they were all detached, until after seeing a model of a mask made by an old man at Kadiak, and presented to the National Museum by Mr. Sheeran, (16268,) to which similar pendants were attached in their proper places. They were of all shapes, crescents, disks, lozenges, leaf-shaped, and formed like lance and arrow points. They were painted with red, blue, green, black, and white native pigments, often nearly as bright as the day they were put on.

Beside these things which we could determine as having appertained to the masks, there were a great variety of which we were unable to determine the use, unless they were parts of wooden armor or of some mimic pageant designed in wood.

We also found a piece of a bow, an article not in use among the Aleüts, who throw all their lances with a hand-board. This is the only portion of a bow yet discovered in our researches in the islands, though the Kaniag'müts now use them commonly in hunting birds. They are made of drift-wood, strengthened with numerous cords of sinew.

Among the other carvings were several effigies, mostly of small size, approximating to the human form; some of birds, seals, and one, nearly life size, of an otter. These were mostly painted in a singular manner. There were also long cylinders, painted and carved like truncheons, which had once contained small stones, and been used as rattles by the Shamans. Many of the small sticks, used, both in the construction of wooden armor and also for little gratings to be placed under the person in the bidarka to avoid contact with the wet seal-skin, were found, but always separated. A carving representing a human arm and hand of life size, but nearly flat, was found, but afterward unfortunately lost.

Many nondescript pieces of carving, which had once been attached to something, and several pieces of wood full of holes, to which something had once been pegged, were found, but our knowledge was not sufficient to refer the isolated pieces to their proper connections.*

* Since the above was written, a short article, by M. Pinart, has appeared in the *Comptes Rendus*, April 19, 1875, No. 15, in which he speaks of this cave and its contents. He states that the bodies were lying at full length on beds of moss; that they were few in number; and that he believes, from the fact that none of them were wrapped up in the squatting posture usually adopted, that this rock-shelter was devoted to the remains of whalers or fishermen, such as I have described among the Kaniagmuts.

If M. Pinart had been able to devote as long a time to the examination of the cave as our party did, it is

We were informed that rumors were current among the natives that one or more caves—never, so far, disturbed—existed in the southern part of the island near the site of an old settlement, now abandoned. Our time was too much taken up with other and imperative duties to permit us to attempt a search, which would probably have been fruitless in the lack of a guide.

There are statements in some of the old voyages to the effect that the Kaniagmûts sometimes interred their dead in the ground, covered them with stones, and erected poles in the vicinity. We have seen no traces of such a practice, though it may have been in vogue among them. The custom, common enough among the Innuits, of erecting poles, streamers, &c., about the dead, now grown to be a matter of superstition, I have no doubt originated in a desire to scare away wild animals. The custom of huddling the body up in a squatting posture, had probably its origin in the desire to save space and labor in making the box or case, or in digging the grave. How much these practices depend upon surrounding circumstances may be seen by comparing the modes in different regions.

In the Chûkehi Peninsula, the Innuits expose their dead where wild animals, as well as their own dogs, may devour them. There is no soil in which to inter them, no wood with which to burn them, nor poles to use as scarecrows against bears and foxes.

In the Yukon region where the soil at a certain depth is frozen, but there is plenty of wood, the body is usually placed in a wooden box erected on four short posts.

In the Aleutian region where the soil offers no obstacle to grave digging, and drift-wood is tolerably abundant, the absence of wild animals, and the readiness with which animal matter dries without putrefying, rendered it an easier task to lay the dead away in the rock-shelters which may be found near almost every camping place.

All these methods (except the first) were originally adopted with a conscious or unconscious relation first to the convenience of the survivors, and then to the security of the dead. Yet they have been modified, or so loaded with other performances indicative of respect or affection, that the question of convenience no longer arises to conflict with hereditary customs which have grown by slow degrees. In this we may trace somewhat of the growth of senti-

probable that he would have found sufficient reason for modifying or rejecting his first impressions. The fact that the remains of women and children, some still retaining portions of their original wrappers, were found in this place by us, is proof that it could not have been one of the caves devoted to the preservation of the remains of whalers or fishermen, from which women and children were, by the nature of the case, excluded. After Mr. Pinart had collected what he chose to take away, we obtained more than a dozen crania of different sexes and ages, showing that the number of interments was larger than he had supposed, and it is certain that nearly all those we found which were sufficiently well preserved to show the method of interment, had been preserved in a squatting posture. Of the identity of the cave or shelter with that visited by M. Pinart there can be no doubt, as we had the same individual, as a guide, who had accompanied him in his examinations.

ment, (as opposed to savage utilitarianism,) which is characteristic of the human mind in all ages.

Since the above was written the National Museum has received from the Alaska Commercial Company a mummy, and a large number of masks collected by their agents at some locality on Chugach or Prince William Sound, Alaska Territory.

The mummy was stripped of its coverings, if it had ever had any; and was that of an adult male. It had been eviscerated through the pelvis and bore marks of the incisions (made by most of the Innuits) for labrets. These were below the corners of the mouth, one on each side. The hair was long and black with no indications of the tonsure. A string around the neck with a few old-fashioned Russian beads upon it, fixed the date as subsequent to the advent of traders. There were no other articles of use or ornament with the remains, which were well preserved.

The masks were flat, rude and heavy, of a different type from those of Kadiak and the Aleutian region, showing much less facility in carving, and less taste and artistic skill. They had been ornamented with rude figures or patterns in red iron-stone pigment, which, however, at some recent period had been retouched with vermilion paint. No information came with the specimens; and it is possible that the finder, thinking to enhance the value of his prize, employed some native to restore the faded ornamentation. They were worn by help of a cross-bar held in the teeth and a wooden lattice at the back of the head. A few stumps of feathers around the edges indicate that they were originally bordered with a row of plumes.

A special article on the masks of this region of America is in preparation.

The specimens just mentioned are interesting, as showing an eastward extension, greater than before supposed, of customs which are only well known in connection with the natives of the Aleutian region; and, as adding one more link to the chain which binds in close relationship the Aleut and adjacent continental Eskimo.

LIST OF ILLUSTRATIONS.

PLATE I.

17480. Aleüt mummy from Kagámil cave. (See page 19.)

This specimen, for the purpose of maintaining it in an erect position while being photographed, was placed in one of the wooden kantags from the same cave, (17459,) which is fourteen and one-half inches long.

17481. Aleüt mummy from Kagámil cave. (See page 19.)

This is of an adult person, the other being that of a youthful person. The lashings have been removed from the upper portion to inspect the contents, but the general condition is hardly disturbed otherwise. The lashings are of rope made of grass.

PLATE II.

17478. Large mummy case from the Kagámil cave. (See pages 11-18.)

The case is raised to give a partial view of the upper surface; (here facing downward;) one of the loops by which it was originally suspended is visible (about the center of the figure) attached to the rim of the top. Two kantags from the cave were used to support it while being photographed.

PLATE III.

17478. Large mummy case from the Kagámil cave. (See pages 11-18.)

The case is viewed from the side, resting on the surface which was uppermost when it was suspended. The sinew of the two nets with which it is covered was originally taut, but from absorption of atmospheric moisture has become loose and slack. Between the nets and the seal-skin cover of the case are seen the remains of an old gut-shirt or kamlayka. The feet of the contained mummy were situated in that part of the case which in the plate is uppermost.

PLATE IV.

17474. Breast mat of grass-cloth from the large Kagámil mummy case. (See page 15.)

This is somewhat magnified to show the mesh of the fabric.

PLATE V.

17482. Aleüt mummy wrapped in seal hide. (See page 18.)

The wrappings have not been disturbed, but do not meet below, where the pelvic foramen is visible.

17483. Aleüt child's mummy case. (See page 20.)

This is covered with fine grass-cloth. The loops for suspending the case in the air are visible on each side. One of them has given way.

PLATE VI.

17249. Ancient Aleüt wooden armor. (See page 18.)
This was fastened behind by loops of cord and the buttons which are still in place.

PLATE VII.

17250. Wooden implement for making fur trimming. (See page 25.)
17254. Bone knife and handle from Kagámil cave. (See page 25.)
17255. Piece of carved wood from Kagámil cave. (See page 26.)
17264. Pumice for dressing skins. (See page 25.)
17446. Wooden doll from Kagámil cave. (See page 24.)
17447. Toy dish from Kagámil cave. (See page 26.)
17448. Toy kantag from Kagámil cave. (See page 26.)
17461. Toy grass basket from Kagámil cave. (See page 24.)
17462. Toy grass basket from Kagámil cave. (See page 24.)
17466. Fold for needles, &c., of grass-cloth, from Kagámil cave. (See page 25.)
17468. Grass matting, of the coarse common kind, with rectangular mesh, made from the grass itself and not from prepared fibre. (See page 16.)
17472. Piece of face cloth, showing the pattern, made of grass fibre, and found in the large mummy case from Kagámil cave. (See page 15.)
17474. Breast mat from the large mummy case, a portion of which, magnified, is shown on plate IV. (See page 15.)

PLATE VIII.

17443. Pushing stick found with the large mummy case in Kagámil cave. (See pages 18, 21.)
The lashing near the point is extraneous.
17444. Part of the keel of a bidarka from Kagámil cave. (See page 21.)
17453. Berry kantag, laid on its side. (See page 21.)
17457. Wooden kantag from Kagámil cave. (See page 21.)
17458. Wooden kantag from Kagámil cave. (See page 21.)
17459. Wooden kantag from Kagámil cave. (See page 21.)

PLATE IX.

17479. Aleüt mummy stripped of its wrappings. (See page 19.)
Note that the left fore arm is broken to make the package more compact.

PLATE X.

- 17251. Wooden comb from Kagámil cave. (See page 24.)
- 17254. Ivory image of seal from Kagámil cave. (See page 23.)
- 17255. Ivory image of fork-tailed beast from Kagámil cave. (See page 23.)
- 17259. Ivory pendant from Kagámil cave. (See page 23.)
- 17260. Three ivory implements, not weapons, perhaps used in sewing or netting, from woman's work-bag found in Kagámil cave. (See pages 23-4.)
- 17261. Two beads or bugles made of bird's bones. (See page 23.)
- 17263. An unfinished gypsum bead showing the beginning of the perforation. (See page 23.)
- 17264. Bracelet of beads made of bird's claws, from Kagámil cave. (See page 22.)
- 17265. Stone dart-head from Kagámil cave. (See page 23.)
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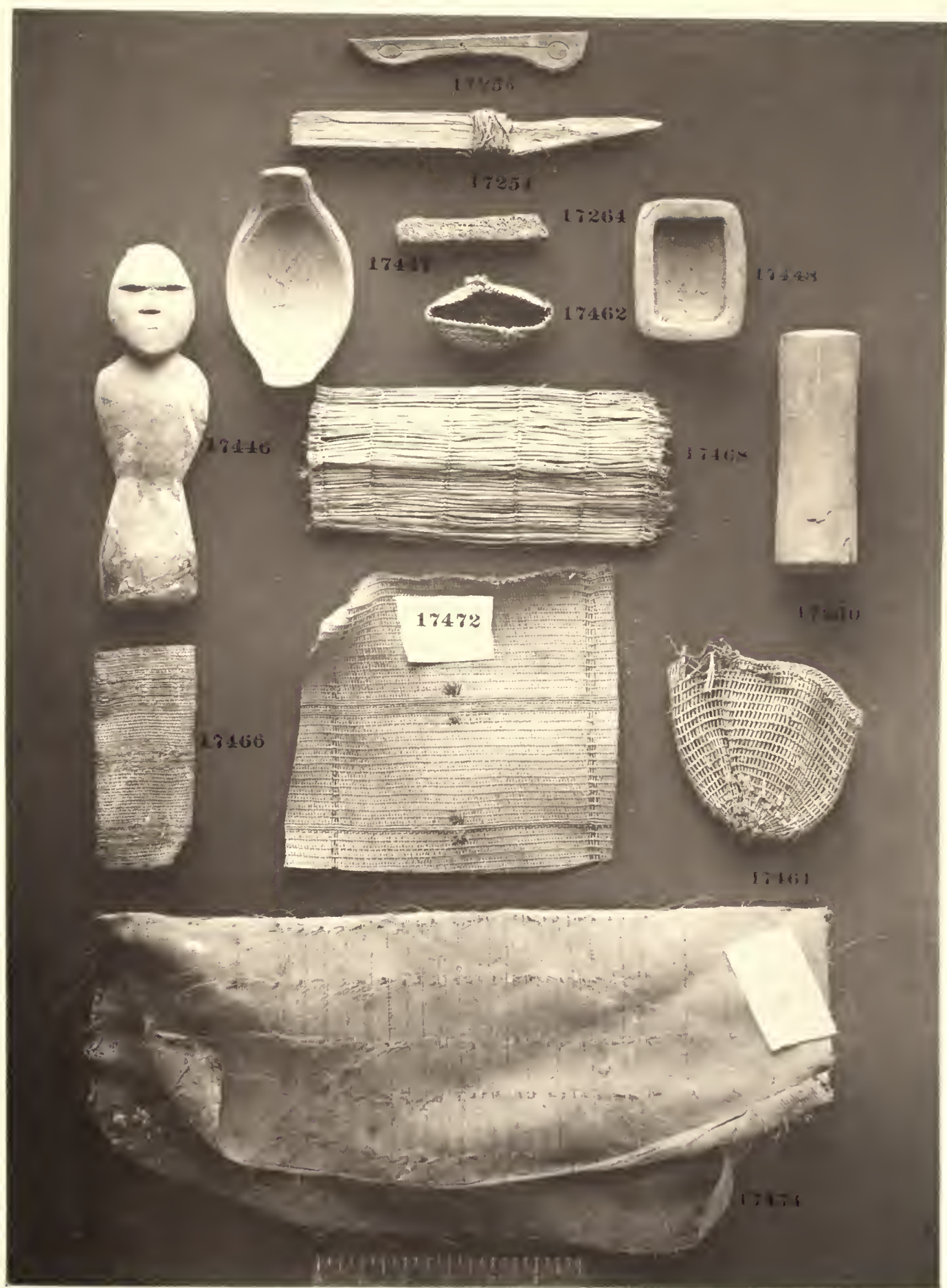


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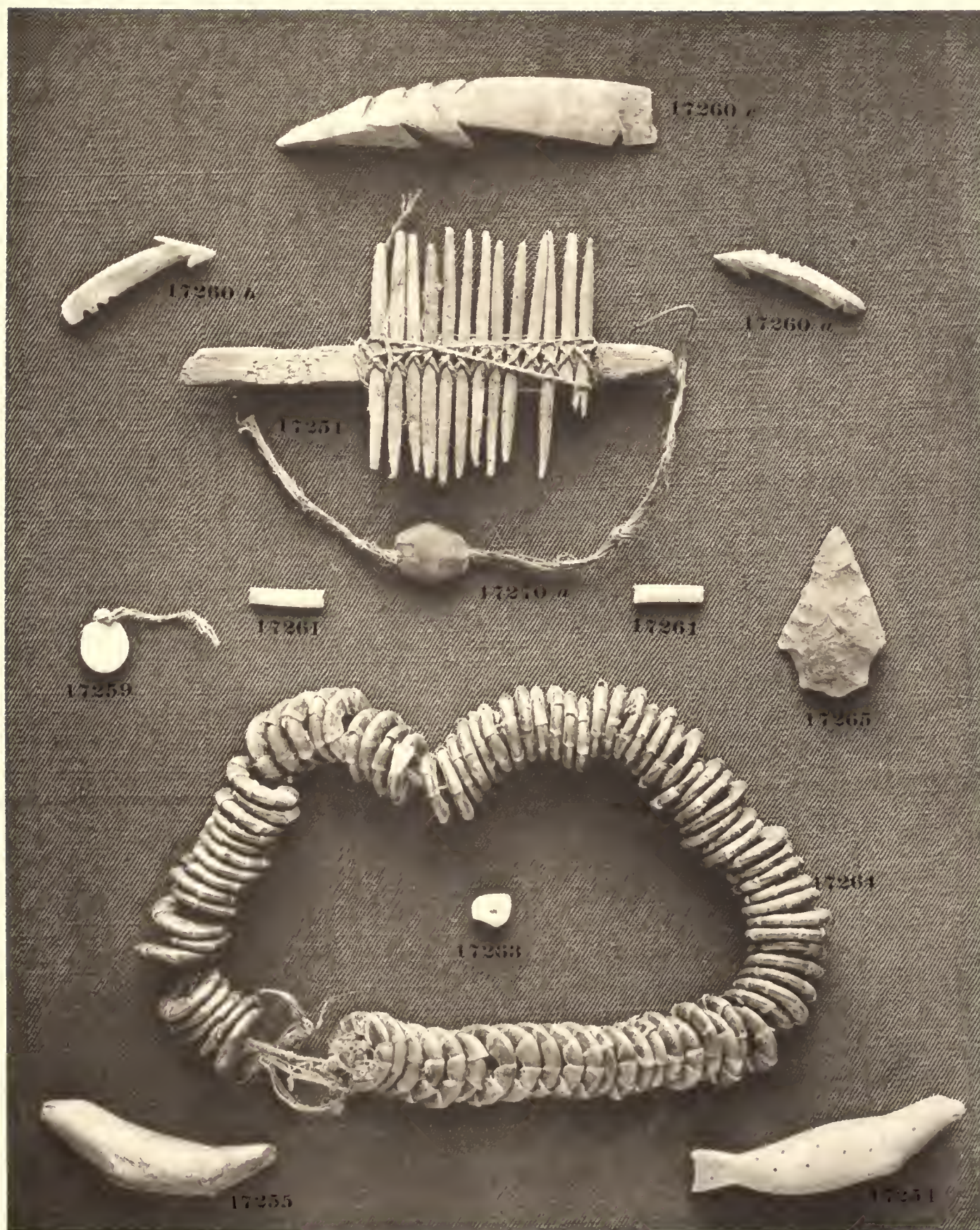
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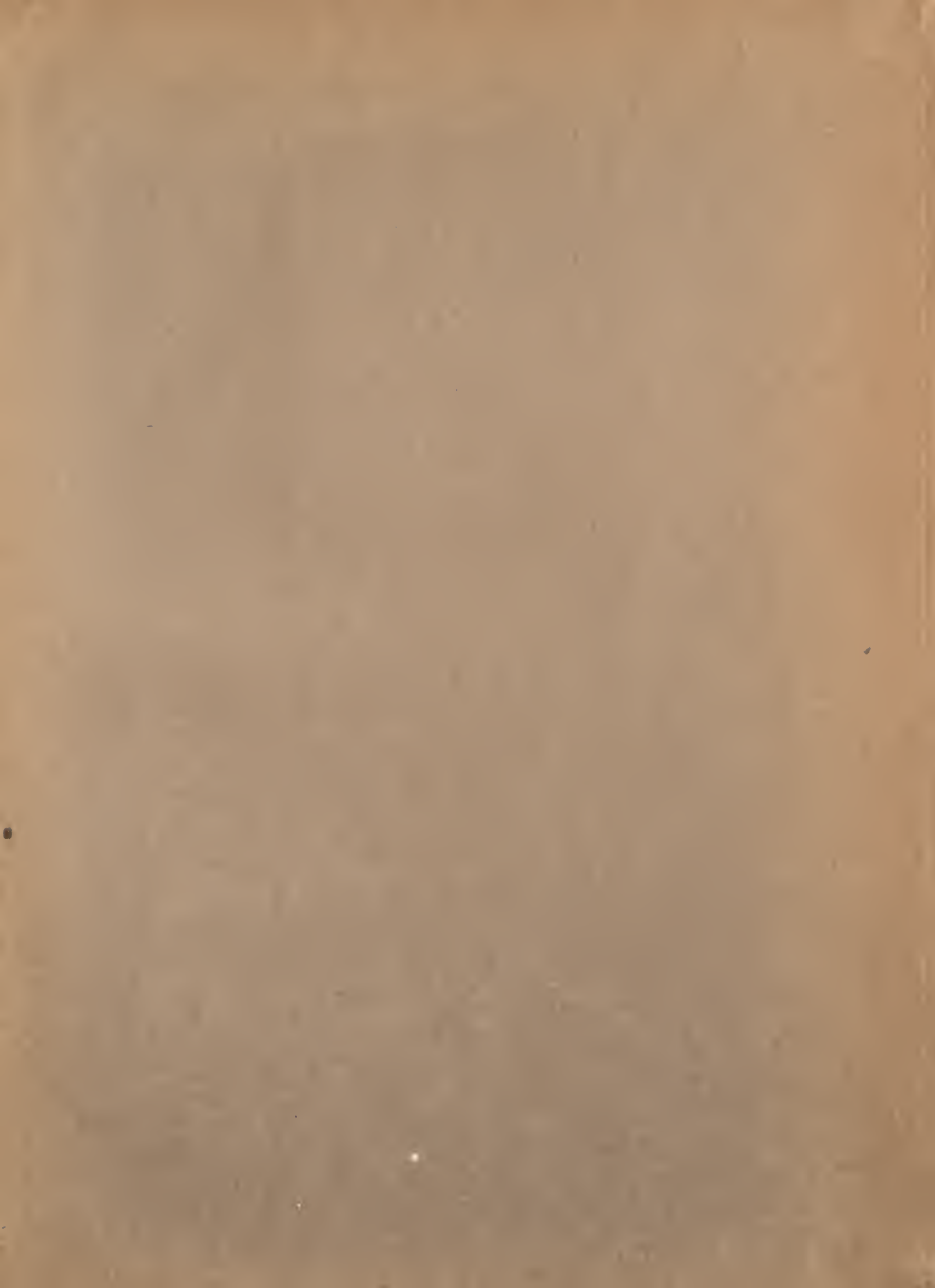
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